

REMARKS

After the foregoing amendment, claims 10-26, as amended, are pending in the application. Claims 10-12 have been amended to more particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 1-9 have been canceled. Claims 13-26 are new. Applicant submits that no new matter has been added to the application by the Amendment.

Rejection - 35 U.S.C. § 102

The Examiner rejected claims 1-4 and 6-8 under 35 U.S.C. § 102 as being unpatentable over U.S. Patent No. 5,913,037 (Spofford *et al.*). Applicant respectfully traverses the rejection.

The Examiner is of the position that Spofford *et al.* discloses a method of monitoring a network comprising detecting the presence of a device, communicating with a first external repository, selecting information corresponding to the device from information stored in the repository, and transferring the selected information from the first repository to the data engine for use in communicating with the device, where the network is dynamically upgraded as the devices are operably linked thereto.

Applicant has canceled claims 1-9 and replaced claims 1-9 with new claims 13-26. New independent claim 13 recites a method, for establishing communication with a device, where the network address of the device is known to the system but the language and/or protocol which would enable communication with the device is unknown to the system. The method recited in new claim 13 comprises the steps of: (a) selecting one of a plurality of data agents based on the network address of the device; (b) communicating with a data dictionary to obtain names of variables associated with a union of the selected network address and the selected data agent; and (c) obtaining values of the variables associated with the network address using the language and protocol of the selected data agent. If the values are obtained using the selected data agent, the type of the device is determined from the values of the variables. If the values are not obtained, steps (a), (b) and (c) are repeated until the values are obtained.

Spofford *et al.* is directed to a network device 102 having input/output ports 104 and 130. The network device includes a management information base manager (MIB manager) 202 which dynamically manages a tree of data objects (col. 3, lines 18-23) in a management information base (MIB) 206. A management agent and device controller (MADC) 200 includes

software and hardware routines to implement management capabilities by monitoring and modifying device objects defined in the MIB (col. 7, lines 48-50). The MIB manager adds a new object to the MIB structure in response to a request by the MADC according to the definition of the of the new object included within the agent (col. 12, lines 51-65). When a new object is added to the MIB, the agent provides the MIB manager with references to subroutines within the agent. The subroutines operate to manage the identified object by monitoring and controlling the object's values (col. 2 line 67 to col. 3, line 5).

As described at col. 6, lines 40-63, communication with a new device is established though a port 104 or 130 by connection signals according to the communication protocol of the network device 102. Upon being informed of the connection, a processor 122 executes an appropriate routine to enable communications with the new device based upon the contents of the connection signals. As described further at col. 8, lines 1-26, communication with the new device may be accomplished only if an upgrade module which supports the type of device is present in the MADC. Upon communicating with the device the MADC updates the MIB to include definitions of new objects associated with the device to be managed. Note that Spofford *et al.* does not describe how the MADC knows which procedure or upgrade module to use when establishing communications with the device or when updating the MIB.

It is clear that Spofford *et al.* is directed to managing devices for which the correct language and protocol for communicating with a device are explicitly known to the MADC such that communication with the device may be directly established when the device is detected. In contrast, new claim 13 recites a process for communicating with a type of device for which the language/protocol of the device are initially unknown and communication can be established only after the language and the protocol for communicating with the device are determined.

As recited in claim 13, communication with an unknown device is established by an iterative process which: (1) selects a data agent based on a network address supplied by the user; (2) searches for information in a data dictionary (i.e. database) for names of variables associated with the selected data agent and the network address; (3) communicates with devices operatively connected to the data agent to obtain values of the variables from the device from which the type of device may be determined; and (4) if communication with the device is not made using the selected data agent, repeats the process until a data agent is found which uses a protocol and language that can communicate with the device.

The process recited in claim 13 is in sharp contrast to the process described by Spofford *et al.* In Spofford *et al.*, explicit knowledge of the type of device is presumed to reside in the MADC 200 such that the correct procedure (agent) for communication with the device is directly selected based on, for example, the connection signals received from the device or from a user input. Consequently, no requests for information in the MIB (or other database) need be made to the MIB when a connection to a device is made (col. 6, lines 61-63). Further, Spofford *et al.* does not communicate with a database (as required by new claim 13) in order to determine the names of variables used by the device. Also, neither the MADC nor the MIB manager determines the type of device from the values of variables obtained from the device.

Spofford *et al.* merely provides a method for adding or deleting objects (variables or values of variables) from an MIB or for modifying values of the objects in the MIB when the type of device is known to the system. There is no teaching or suggestion of determining the type of the device knowing only the network address of the device.

Applicant submits that Spofford *et al.* does not anticipate claim 1 as would be applied to new claim 13. Accordingly Applicant respectfully requests reconsideration and withdrawal of the §102 rejection of claim 1 and allowance of new claim 13.

New claims 14-21

Claims 14 and 19 each recite obtaining the names of variables from a data central if the names of the variables are not available from the data dictionary. Spofford *et al.* does not teach or suggest communicating with a second data base if the names of variables can not be obtained from a first data base.

Further, it is respectfully submitted that since claim 13 has been shown to be allowable, claims 14-21 dependent on claim 13 are allowable, at least by their dependency. Accordingly, for all the above reasons, Applicant respectfully requests allowance of new claims 14-21.

Rejection - 35 U.S.C. § 103

The Examiner rejected claims 5 and 9-12 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,913,037 (Spofford *et al.*) in view of U.S. Patent No. 5,935,209 (Budhreja *et al.*). Applicant respectfully traverses the rejection.

Amended claim 10 recites a method for presenting values of variables from a selected device to a user interface in human-understandable form, comprising the steps of: obtaining the names of variables associated with the selected type of device from a data dictionary, obtaining values of variables from the selected type of device, obtaining information from the data dictionary about the language of the type of device to facilitate translation of the values into a human-understandable form, and translating, by a data engine, the obtained values into the human-understandable form using the information from the data dictionary for presentation to the user interface.

The Examiner is of the position that Spofford *et al.* discloses detecting by a data agent device information including the identity of the device, the language of the device and device data, obtaining from the data agent the device information and translating by a data engine the obtained device data into a selected human-understandable form. The Examiner is of the further position that Budhraj *et al.* discloses obtaining language information from a data dictionary to facilitate translation of device data by the data engine into a human understandable form.

As discussed above, Spofford *et al.* merely discloses obtaining values from a device in SNMP language and adding these values to the MIB. There is no teaching or suggestion of determining the language of the device or of translating the values obtained from the device to another language or to a human-understandable form.

Spofford *et al.* further discloses an external management console 110 (Fig. 1, and col. 5, lines 26-32) for monitoring and controlling network statistics. An external management module 416 is also disclosed at Fig. 4 and col. 11, lines 41-43. However, neither of the preceding disclosures teaches or suggests that data retrieved from the device is presented to a user interface in a human-understandable form.

Budhraj *et al.*, at col. 21, line 5 to col. 22, line 10 claims a process in which data obtained from a database is converted by a computer program to Hypertext Markup Language. This is not the same as obtaining from a database (data dictionary) information related to a an arbitrary type of device that facilitates translation of the information from a device into a prescribed language. Budhraj *et al.* merely teaches a hard coded process which is suited to translating only a specific known language, such a SNMP, obtained for instance from a database, into another language. In sharp contrast, claim 10 recites obtaining from a database information

based on a type of device, and using that information to control a computer program to translate the language of the type of device into another language. Stated another way, the information obtained from database by Budhreja *et al.* does not facilitate translation, but is in fact the data that is translated. In contrast, the process recited in claim 10 uses the data from the data dictionary to facilitate translation of data from a separate source into a human-understandable form.

Applicants submit that the combination of Spofford *et al.* and Budhreja *et al.* does not make amended claim 10 obvious. Neither Spofford *et al.* nor Budhreja *et al.*, individually or in combination, teach or suggest translating in a data engine, information from a device into human-understandable form using translation information from a data dictionary to facilitate the translation, where the translation information is based upon the type of the device. Accordingly Applicants respectfully request reconsideration and withdrawal of the §103 rejection of claim 10.

Further, it is respectfully submitted that since claim 10 has been shown to be allowable, claims 11-12 dependent on claim 10 are allowable, at least by their dependency. Accordingly, for all the above reasons, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claims 11 and 12. .

New claims 22-26

New claim 22 recites a computer system including a data engine, a plurality of data agents, at least two of which data agents operate with different languages and/or protocols, and a data dictionary which is adapted to provide the names of variables corresponding to both the network address and to the language and/or protocol of a device connected to the system at the network address.

Spofford *et al.* discloses a network device 102 which connects with a plurality of nodes 108 and a hub 134. Each of the nodes and the hub include appropriate software and hardware to enable communications with a specific device 102 using the known protocol of the device 102 (col. 5, lines 22-25 and col. 6, lines 17-21). Spofford *et al.* also discloses a management information base (MIB) to store SNMP data objects. Each object is stored at a particular location in the MIB and is accessed by using an object identifier (OID). As well known, an OID is an address in SNMP which, when decoded, specifically identifies the location

of the object. (col. 7, lines 40-43). As made clear by Spofford *et al.*, the MIB is capable of storing information in only a single language, that being SNMP. Further, there is no teaching or suggestion that the MIB manager or MADC has the ability to convert information received from a device in a language other than the language used by the MIB to the language of the MIB. Consequently, it follows that Spofford *et al.* can connect with only those devices which use the same single language as the MIB.

In sharp contrast to Spofford *et al.*, new claim 22 recites a system which is capable of connecting with devices which use at least two different languages and/or protocols. Further, claim 22 recites a data dictionary which includes logical processing for locating one or more pieces of data which correspond to the combination of a network address and a protocol and/or language. Spofford *et al.* does not teach or suggest a type of logical processing which is capable of accessing data based on the combination of two independent pieces of information.

Budhreja *et al.*, as discussed above, merely teaches converting information from one language to another and does not teach or suggest any of the above-identified deficiencies of Spofford *et al.* Accordingly Applicant respectfully requests allowance of new claim 22.

Further, it is respectfully submitted that since new claim 22 has been shown to be allowable, new claims 23-26 dependent on claim 22 are allowable, at least by their dependency. Accordingly, for all the above reasons, Applicant respectfully requests allowance of new claims 23-26.

Conclusion

Insofar as the Examiner's objections and rejections have been fully addressed, the instant application, including claims 10-26, is in condition for allowance and Notice of Allowability of claims 10-26 is therefore earnestly solicited.

Respectfully submitted,

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August 24, 2004
(Date)

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